



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/821,732	03/30/2001	Yukio Hemmi	016887/1038	5467

22428 7590 03/17/2003

FOLEY AND LARDNER  
SUITE 500  
3000 K STREET NW  
WASHINGTON, DC 20007

EXAMINER

KEITH, JACK W

ART UNIT	PAPER NUMBER
----------	--------------

3641

DATE MAILED: 03/17/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.  
**09/821,732**Applicant(s)  
**Hemmi et al**Examiner  
**Jack Keith**Art Unit  
**3641**

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on Jan 13, 2003
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above, claim(s) 6-8, 10, 11, and 13-20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5, 9, and 12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claims \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some\* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s). 8 6) ☐ Other:

Art Unit: 3641

## **DETAILED ACTION**

### ***Election/Restriction***

1. Applicant's election without traverse of invention I, species IB, A, a, iii and TiO<sub>2</sub> and ZrO<sub>2</sub> in Paper No. 13 is acknowledged.
2. Claims 6, 7, 10, 11 and 13-20 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention/species, there being no allowable generic or linking claim. Election was made without traverse in Paper No. 13.
3. Claim 8 is withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species TiO<sub>2</sub> and SiO<sub>2</sub>, there being no allowable generic or linking claim. Election was made without traverse in Paper No. 13.
4. An action on the merits to claims 1-5, 9 and 12 follows below.

### ***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Art Unit: 3641

6. Claims 1-5 are rejected under 35 U.S.C. 102(b) as being anticipated by Skarpelos et al (5,028,384).

Skarpelos discloses applicants inventive concept. A nuclear reactor power plant employing a reactor (14), a steam turbine (24) and a radioactive material separating and removing apparatus (20) located inside the reactor pressure vessel. Skarpelos further discloses that the radioactive material separating device or steam dryer is coated with  $\text{TiO}_2$  and/or  $\text{ZrO}_2$  (i.e., metal oxide).  $\text{TiO}_2$  as set forth by applicant (see specification page 7, ln 24+) is a known Superhydrophilic substance.

See figure 1 and columns 1-2, lns 60-16; column 4, lns 56-68 and column 5, lns 1-23.

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 9 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Skarpelos et al ('384) as applied to claims 1-5 above, and further in view of Cowan II et al (5,465,278).

Art Unit: 3641

As set forth above Skarpelos discloses applicant's inventive concept; however, from the figure of Skarpelos it is not clear if the steam dryer (20) (radioactive material separating device) is corrugated.

Referring to figure 1 of Cowan II et al ('278) one can clearly see that steam dryer located within the pressure vessel are corrugated. Accordingly, having a corrugated steam dryer is known within the art, such would be advantageous within Skarpelos reactor in order to increase the exposed surface area of radioactive material separating device. Additionally, substitution of one steam dryer for another type would have been obvious to one having ordinary skill in the art.

Regarding claim 9 - product by the process - the patentability of a product does not depend on its method of production. If the product (corrugated plates) in the product by process claim is the same as the prior art, the claim is unpatentable even though the prior art product was made by a different process. See In re Thorpe, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985). Also see MPEP § 2113.

Accordingly, the process of coating the steam dryer in Skarpelos meets applicant's claimed inventive concept.

### ***Conclusion***

9. The cited prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Art Unit: 3641

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jack Keith whose telephone number is (703) 306-5752. The examiner can normally be reached on Monday through Friday from 7:00 to 4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Carone, can be reached on (703) 306-4198. The fax phone number for the organization where this application or proceeding is assigned is (703) 305-7687.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1113.

jwk

March 7, 2003

  
MICHAEL CARONE  
SUPERVISOR/ART EXAMINER